

WHAT IS CLAIMED IS:

1. A plate assembly comprising:
a plate member having a recessed portion; and
a lid member mounted on said plate member to cover said recessed portion,
wherein a gap is formed between said plate member and said lid member around said recessed portion so as to allow a liquid to permeate said gap due to capillarity while preventing said liquid from entering said recessed portion.
2. A plate assembly as set forth in claim 1, wherein said gap is so formed as to fill said liquid in said gap due to capillarity.
3. A plate assembly as set forth in claim 1, wherein said gap is so formed as to allow said liquid to permeate said gap due to capillarity up to a portion just above a side wall of said recessed portion.
4. A plate assembly as set forth in claim 1, wherein said lid member has a through hole for injecting said liquid into a space which is defined between said plate member and said lid member and which is communicated with said recessed portion.
5. A plate assembly as set forth in claim 1, wherein said plate member has an excessive liquid receiving portion for receiving therein an excessive part of said liquid.
6. A plate assembly as set forth in claim 1, wherein said lid member has a through hole for feeding a sample into said recessed portion.
7. A plate assembly as set forth in claim 1, which further comprises means for holding said gap so as to allow said liquid to permeate said gap due to capillarity while

preventing said liquid from entering said recessed portion.

8. A plate assembly as set forth in claim 1, wherein said liquid is an adhesive.

9. A plate assembly as set forth in claim 8, wherein said lid member is bonded to said plate member, said plate member having a bonded surface which is formed so as to surround said recessed portion, said plate member having an adhesive relief portion which is formed around said bonded surface so as to be recessed from said bonded surface, and said gap being formed between said bonded surface and said lid member so as to allow said adhesive to permeate said gap due to capillarity.

10. A plate assembly as set forth in claim 9, wherein said lid member has an adhesive injecting hole which is open to a portion of said adhesive relief portion of said plate member in the vicinity of said bonded surface.

11. A plate assembly as set forth in claim 9, wherein said lid member has an adhesive injecting hole, at least a part of which is open to said adhesive relief portion of said plate member.

12. A plate assembly as set forth in claim 9, wherein said lid member has an adhesive injecting hole which is open to said bonded surface on the side of an end portion of said recessed portion.

13. A plate assembly as set forth in claim 9, wherein said lid member has a protrusion, at least a part of which engages said adhesive relief portion of said plate member.

14. A plate assembly as set forth in claim 9, wherein at least one of said bonded surface of said plate member

and said lid member has a spacer protrusion which contacts the other of said bonded surface of said plate member and said lid member to form said gap between said bonded surface of said plate member and said lid member so as to allow said adhesive to permeate said gap due to capillarity.

15. A plate assembly as set forth in claim 9, wherein at least one of said adhesive relief portion of said plate member and said lid member has a spacer protrusion which contacts the other of said adhesive relief portion of said plate member and said lid member to form said gap between said bonded surface of said plate member and said lid member so as to allow said adhesive to permeate said gap due to capillarity.

16. A plate assembly as set forth in claim 9, wherein each of said bonded surface of said plate member and said lid member has a spacer protrusion, and said spacer protrusion of said plate member contacts said spacer protrusion of said lid member to form said gap between said bonded surface of said plate member and said lid member so as to allow said adhesive to permeate said gap due to capillarity.

17. A plate assembly as set forth in claim 9, wherein at least one of said plate member and said lid member have a plurality of spacer protrusions which contact the other of said plate member and said lid member to form said gap between said bonded surface of said plate member and said lid member so as to allow said adhesive to permeate said gap due to capillarity, and a distance between adjacent two of said plurality of spacer protrusions increases as a distance from said recessed portion increases.

18. A plate assembly as set forth in any one of claims 14 through 17, wherein at least one of said bonded surface of said plate member and said lid member has a protrusion

which has a lower height than said gap so as not to contact the other of said bonded surface of said plate member and said lid member.

19. A plate assembly as set forth in claim 9, which further comprises a spacer, arranged between said plate member and said lid member, for forming said gap between said bonded surface of said plate member and said lid member so as to allow said adhesive to permeate said gap due to capillarity.

20. A plate assembly as set forth in claim 1, wherein said liquid is a filler.

21. A plate assembly as set forth in claim 20, wherein said plate member has a sealing surface which is formed so as to surround said recessed portion, said plate member having a lid member fixing surface which is separated from said sealing surface by a pass partition groove, and said lid member being fixed to said lid member fixing surface to form said gap between said sealing surface and said lid member so as to allow said filler to permeate said gap due to capillarity.

22. A plate assembly as set forth in claim 21, wherein said filler is arranged between said sealing surface and said lid member.

23. A plate assembly as set forth in claim 21, wherein said lid member has a filler injecting hole, which is open to a portion of said pass partition groove of said plate member in the vicinity of said sealing surface, for injecting said filler into said pass partition groove to allow said filler to permeate said gap due to capillarity.

24. A plate assembly as set forth in claim 21, wherein said lid member has a filler injecting hole, at least a

part of which is open to said pass partition groove of said plate member, for injecting said filler into said pass partition groove to allow said filler to permeate said gap due to capillarity.

25. A plate assembly as set forth in claim 21, wherein said lid member has a filler injecting hole, which is open to said sealing surface on the side of an end portion of said recessed portion of said plate member, for injecting said filler into said pass partition groove to allow said filler to permeate said gap due to capillarity.

26. A plate assembly as set forth in claim 21, wherein at least one of said sealing surface of said plate member and said lid member has a spacer protrusion which contacts the other of said sealing surface of said plate member and said lid member to form said gap between said sealing surface of said plate member and said lid member so as to allow said filler to permeate said gap due to capillarity.

27. A plate assembly as set forth in claim 21, wherein at least one of said lid member fixing surface of said plate member and said lid member has a spacer protrusion which contacts the other of said lid member fixing surface of said plate member and said lid member to form said gap between said lid member fixing surface of said plate member and said lid member so as to allow said filler to permeate said gap due to capillarity.

28. A plate assembly as set forth in claim 21, wherein each of said sealing surface of said plate member and said lid member has a spacer protrusion, said spacer protrusion of said plate member contacting said spacer protrusion of said lid member to form said gap between said sealing surface of said plate member and said lid member so as to allow said filler to permeate said gap due to capillarity.

29. A plate assembly as set forth in claim 21, wherein at least one of said plate member and said lid member have a plurality of spacer protrusions which contact the other of said plate member and said lid member to form said gap between said sealing surface of said plate member and said lid member so as to allow said filler to permeate said gap due to capillarity, and a distance between adjacent two of said plurality of spacer protrusions increases as a distance from said recessed portion increases.

30. A plate assembly as set forth in any one of claims 26 through 29, wherein at least one of said sealing surface of said plate member and said lid member has a protrusion which has a lower height than said gap so as not to contact the other of said sealing surface of said plate member and said lid member.

31. A plate assembly as set forth in claim 21, which further comprises a spacer, arranged between said plate member and said lid member, for forming said gap between said sealing surface of said plate member and said lid member so as to allow said filler to permeate said gap due to capillarity.